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The Difference of these Accounts may, in my Opinion, be reconciled, by supposing, that the Explosion might have been heard abroad in such Places where it was more violent; and not in others where it was less so.

As for any thing (I presume you meant lambent Flame, Vapour, &c.) being perceiv'd on the Surface of the Ground, before or during the Earthquake, nothing of this kind has as yet been mention'd to me from any Quarter.

I find there has been a Report of a Meteor, like a Ball of Fire, appearing in the Morning before the Shock was felt; but it is, by the judicious Part of the World, rank'd among the other *Mirabilia* usually invented upon these Occasions to amuse the Vulgar. I am, Sir,

Your most obedient, &c.

J. Nixon.

LI.

A Letter from the Rev. P. Doddridge D.D. to Mr. Henry Baker F. R. S. containing fome Account of the late Earthquake felt at. Northampton.

Northampton, October 17. 1750.

HE Shock of an Earthquake lately felt here, which has been so much talked of, and in some public Papers magnified far beyond the Truth, happened on Sunday the 30th of September,

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September, about 20 Minutes after 12 at Noon. Our Mercury strangely fixed it at a Quarter before One; which is so palpable a Mistake, and contrary to the certain Knowlege of so many Hundreds of People, that I could not but be surprised to see it.

The Effects here were by no means so considerable as were represented, especially at London. was at that time in Company with a pretty large Number of Friends, just returned from divine Worship, and hardly set down in the Parlour; but no one of us felt any thing of it; and if we heard any Noise, did not distinguish it from a Coach: But some Gentlemen, who were retired into their Studies up two Pair of Stairs, plainly felt it; yet they were not the twelfth Part of the Persons then in my House, who all, whether on the Ground, or first Floor, were quite insensible of it. However, it is certain that a great Number of Persons in different Parts of the Town, perceived themselves lifted up by it, as they were in their Houses, tho' hardly any in the Streets took Notice of it. Those that accurately observed it, describe it as something horizontal rather than perpendicular. A Lady of my Acquaintance standing with her Face to the South-West, plainly felt her Heels lifted up, and was thrown to much on her Toes, that she was in Danger of falling: And it was observed, that some Casements were moved outward, as if an Attempt had been made to force them open, and the Clattering of Sashes was as when a strong Wind blows against them.

In the long Street that runs from South to North, it was observed, that the Shock was felt more on the Eastern than the Western Side of the Way; and I

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think the whole Eastern Part of the Town was most affected. Dr. Stonehouse, who lives in that Part of it, selt it with great Violence, as if a loaded Waggon had run strongly against the gable End of his House: And tho' the Walls are remarkably thick, he was greatly alarm'd with an Apprehension that they would have fallen.

What further confirms this Remark of the horizontal, or at least oblique Direction of the Impulse is, that a Cradle was rock'd by it. In the House of Mr. *Teoman*, where our little philosophical Society meets, it threw down a Board from the Tester of a Bed; yet Mr. *Teoman* himself did not feel it.

There was a Report, that in Abington-Street some Chimnies were thrown down; and this brought Numbers of People from different Parts of the Town, to survey the suppos'd Ruins; but it only served to illustrate the Uncertainty of Rumour. However, it was true that a few Bricks were thrown down from a Chimney in College-Lane.

It is very certain, that all who felt the Shock heard a hollow rushing Noise; which, so far as I can learn, seemed to come in a Direction from the South-West to the North-East. In Rooms where several Persons were together, some were strongly sensible of it, while others felt nothing at all: And (cæteris paribus) I think it was felt more sensibly by those above than those below, and by such as were sitting, standing, or leaning, rather than walking.

A lumbering kind of Noise was heard by some in lower Apartments, as if some one over their Heads had fallen down on a sudden, with a dead Weight;

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and some thought they heard such a Noise in the Floor beneath; some thought the Quivering of the Ground continued longer than others apprehended; But I have met with none who in this respect were so accurate in their Observations, as my ingenious Friend Mr. Shippley, who assures me that he selt four distinct Concussions (the second and third of which were much more violent than the first and last) all within 2 or at most 4 Seconds.

As far as I can learn from the most diligent Inquiry I can make, the Tremulation of the Ground extended itself at least 60 Miles in Length from South to North, and from West to East about 25, or at

most 30.

It did not affect either Newport-pagnel, or Tow-cester, to the South; but was selt very near the latter, and at least 6 Miles South of this Place, and all the Way between that and Nottingham, and a little beyond it Eastward; it scarce reached Higham-Ferrers, and was not selt at Coventry, and but very seeble within 5 or 6 Miles to the East of it: But its greatest Violence seemed to have been spent on the Villages of Creaton, Cottesbrook, Kilmarsh, Maidwell, Eveston, and some other small Towns within 4 or 5 Miles of Market-Harborough, mostly between us and that Place.

At Creaton, a Friend of mine was so moved, as he sat at Dinner, that his Elbow struck against the Wall, tho' he sat at some Distance from it; the Roof of the House gave a great Crack; and in a neighbouring House a brass Kettle was thrown down, as in another a Plate of Pewter was.

At Cottesbrook, Kilmarsh, and Weston, the Congregations, which were not yet come out of their respective Churches, were all exceedingly terrified; some shricked out, others quitted the Place; and the worthy Clergyman at Weston with Sutton near Harborough, says, in a Letter published in our Mercury, dated the 2d inflant, 'that, as they were fing-' ing after Sermon (he adds, a Quarter before One) the whole Congregation were thrown into the ' utmost Consternation, so that the Singers could hardly prevail on themselves to finish the Anthem. He adds, ' that he thought that Part of the Church betwixt the Chancel and the Pillar next to ir, would have funk into the Earth; and that it was attended with a loud and dreadful Noise, from a fort of subterraneous Explosion.'

At Maidwell, Mr. Scawen, leaning upon a large Marble Chimney-Piece, was violently shaken; and in the neighbouring Parish of Kilmarsh, Mrs. Hanbury, who was then reading by her Fire-side, her Chair being tilted forward, was thrown down on her Hands and Knees; and the whole Parish at Church were so alarm'd, that they broke up the Assembly, and ran out into the Church-yard; but the Minister persuaded some of them to return, and dismissed them (as I am told) with an extempore Prayer proper to the Occasion.

Some strange Stories have been told of much more violent Essects produced elsewhere; particularly that a Chasin was open'd at a Garden at *Daventry*; but I can find no real Foundation for them.

No Building, that I can learn, has any-where been thrown down; but I am very credibly informed,

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that a Beam in the new Toll-house near Harborough was split by the Shock: and one tragical Effect is certain; I mean, that Mrs. Alicock, Wife to the chief Gentleman in Loddington, who had been deliver'd of her first Child a few Days before, and was in a very fine Way, was so alarmed with the Accident, that she expired within a few Hours, to the great Grief of all that knew her.

I was surprised to see how little the Inhabitants of Northampton were impressed with this awful (tho' by no means supernatural) Event: The Sound of such a Shock was, in a manner, grown familiar to their Ears, by what they had heard from London, and other Places. Many did not themselves perceive it; others found it very gentle; and in a very sew Hours it seem'd to have affected them no more than a Shower of Rain.

I observe, that most Accounts from the Northern Parts date the Shock later than we felt it here; but that may perhaps be accounted for by the Difference of Clocks; but where they were most exactly adjusted, all agree pretty well as to the Time. I find also, that the Degree of the Shock was very different in nearly contiguous Places. Thus at Easton-Maudit it was hardly felt at all; but at Castle-Ashby was very violent. It was sensibly perceived at Lord Pomfret's, and not at all at Towcester, tho' within half a Mile of it; and, generally speaking, the higher Places were most affected, tho' in some it was quite otherwise.

It had been calm cloudy Weather for several Days before; and what little Wind there was to be perceived was generally North-West. The Height of

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the Barometer was as follows, on and about this remarkable Day; viz.

Thursday, Sept. 27.	29-95
Friday, Sept. 28.	29-9
Saturday, Sept. 29.	29-88
Sunday, Sept. 30.	29-79
Monday, Oct. 1.	29-68
Tuesday, Oct. 2.	29—80
Wednesday, Oct. 3.	29—83

The Morning on which this Phanomenon happened was remarkably caim; but quickly after the Shock the Wind rose, and Clouds which had covered the Heavens for several Days, were pretty much dispersed. On Monday, and on Tuesday and Wednesday, the Sun shone clearly all Day long. There was a Report, that, on the Morning of that Sunday, about 4 o' Clock, a Ball of Fire was seen; but I could not trace it to any Certainty. On Monday Night the Sky in the East was as red as Blood; and, on Tuesday Night, we had absolutely the finest Aurora Borealis that I remember to have seen; of which I shall add a short Account, by way of Postscript, when I have added a miscellaneous Circumstance or two to those I have mentioned concerning the Earthquake.

I am told, that, in some Places, two Shocks were felt, nearly at the same time, and within a sew Seconds of each other. This is said to have been the Case at Nosely in Leicestershire, which stands very high; and at Telvertost in this County. But I have received the most certain Account of this from Hill. Morton. Mr. Pool, who keeps the Turnpike there,

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and is remarkably curious, for a Man in his Sphere of Life, informs me, that he felt himself moved, as he sat in his Chair, in such a manner, that he thought somebody had been at the Door; or (if I understand him right) as if something had fallen against it: And when he came to the Door, about two or three Seconds after, he selt a Motion that he certainly knew to be an Earthquake.

I do not hear of any thing seen in or upon the Ground; unless the Case of a good Woman at Welden may be counted an Exception; who says, that, while she was shaken by it, she saw the Ground move around her.

Mr. Scawen is very confident, that he heard that rushing Noise (so generally spoken of by all who observed any thing extraordinary) not only before, but after the Shock; and that he could by both trace the Direction mentioned above.

I shall only add, that a very worthy Lady of this Town (Niece, as I remember, to Sir Hans Sloane) observed, that, just before the Shock, her Birds drooped remarkably, and hid their Heads under their Wings: A Circumstance which is often observed in Italy, and other Places where these Phanomena are frequent.

These are the most material Circumstances I have yet had an Opportunity of collecting; and if any thing else, which seems at all worthy of Notice, should occur, I shall be very ready to impart it.

P. S. The principal Circumstances attending the Aurora Borealis mention'd above, were as follows:

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On Tuesday, the Second of this Month, as I was walking home from a neighbouring Village, between Six and Seven in the Evening, the Sky being remarkably clear, and the Moon then shineing with delightful Lustre, I happened to turn, and observe in the North-East a pretty large Cloud, nearly in the Form of a Globe; which feemed first of a whitish, then of a very luminous Appearance. It feem'd connected with a Cloud, which was dark, and fomewhat bluish, which forcad itself (almost like a vast Beam of a Building) from the North-East to the North-West. At each End it was a little bent towards the Horizon; but by far the greater Part was in a horizontal Polition, and seemed to occupy the Northern Part of the Heaven, from the Altitude of 10 to about 15 Degrees. The Cloud I first mention'd foon appear'd like a Globe of lucid Fire, much brighter than the Moon; and shot Coruscations, sometimes in a perpendicular Direction, but much more towards the dark horizontal Beam, if I may be allow'd fo to describe it (thro' which, by the way, I could not then differn any Stars). Thro' this the Light darted from North-East to North-West; fo that at length it seem'd all in a Blaze; and from it there shot up several luminous Pillars, perpendicular to the Horizon, and directed towards the Zenith. They were of very unequal Lengths, and some of them appear'd in a conical rather than a cylindrical Form. As those to the West brightened, those first raised disappeared; till at length all the horizontal Tract of Light vanished, and some long truncated Pillars, often varying

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varying their Length, remained in the West; often rising almost to the Zenith, but generally seeming to hang between 30 and 70 Degrees, so far as I could conjecture. When this beautiful Appearance ceased, the Sky appeared reddish in the East; what before constituted the lucid Globe, seemed resolved into light Clouds, of various Forms; and that Part of the Horizon looked much as it does in a Summer's Morning, when the Sun is within a few Minutes of its rising, and tinges the Clouds of a light Red. But all this seemed to disperse in a few Minutes, about Seven; and I neither saw nor heard of any thing remarkable.

LII.

Deene, Oct. 2. 1750.

Read Oct. 25. N the Morning there was a gentle westerly Wind, something cool; but for some time before the Earthquake happen'd, it was quite calm and close, and much warmer. The Air was very dry, and filled with Clouds that had no Motion, but prevented the Sun's appearing (I think) all Day. The Noise that preceded the Earthquake was, for a sew Seconds, like the rumbling